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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,524	10/16/2003	Seong Jin Jo	9988.064.00-US	3986

30827 7590 09/26/2007
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WASHINGTON, DC 20006

EXAMINER

PERRIN, JOSEPH L

ART UNIT	PAPER NUMBER
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1746

MAIL DATE	DELIVERY MODE
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09/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/686,524

Applicant(s)

JO, SEONG JIN

Examiner

Joseph L. Perrin, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01 August 2007 have been fully considered but they are not persuasive.
2. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.
3. Re the §102 rejection over DURAZZANI, applicant argues that DURAZZANI does not disclose the front outer tub that "comprises a combination of a first material and a second material, wherein the combination of the first and second material is injection molded to form the front outer tub." The Examiner disagrees. Given the broadest reasonable interpretation, the disclosure of DURAZZANI clearly teaches the combination of a first material (i.e. counterweights) and second material (i.e. plastic shell) thereby forming a front outer tub and that it is known to both combine calcium carbonate by inserting into the injection molded plastic or forming the outer tub by "calcium carbonate ... added as a filler to plastic to reach desired properties of the final plastic material or part" which one having ordinary skill in the art would clearly understand as readable on a metal powder (calcium carbonate) blended with a plastic thereby forming the tub (see col. 3, lines 55-65). Clearly, while combining calcium carbonate and the plastic tub by insertion is the main embodiment of DURAZZANI,

there is also disclosed the integration of calcium carbonate into plastic as a filler which would clearly be understood by one having ordinary skill in the art that fillers are added to plastics and injected molded. Either way (i.e. separately combined or integrally blended), both provide the same property or functional purpose of providing a counterweight or ballast effect in the front outer tub, as evidenced by DURAZZANI, and thus neither manner of combining calcium carbonate with plastic to form a tub portion having higher weight/density is considered a patentable modification in view of DURAZZANI.

4. Regarding the §103 rejection over DURAZZANI, applicant argues that “all limitations must be taught or suggested by the prior art”. The Examiner notes that the recent Supreme Court decision in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007) forecloses teaching, suggestion or motivation as the only rationale for obviousness. As previously discussed, in col. 3, lines 4-62, DURAZZANI expressly discloses combined plastic shells and calcium carbonate ballasts/counterweights in a washing machine tub. DURAZZANI further teaches that it is also known that “calcium carbonate ... can be added as a filler to plastic to reach desired properties of the final plastic material or part” (see col. 3, lines 61-65) and is replete with the plastic tub being molded (it is common knowledge that injection molding is one of the primary processes for molding plastic tubs; DURAZZANI discusses injection molding in col. 1, lines 59-64). Thus, while the position is taken that such disclosure anticipates applicant’s claimed invention, even if *arguendo* one were to construe the injection molding of filler and plastic as a separate tub making process than the tub used in DURAZZANI the position

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is taken that it would have been obvious to one skilled in the art to substitute one known tub making method for the other to achieve the predictable results of adding calcium carbonate as filler to plastics to increase the weight of the plastic tub.

5. Regarding the remaining §103 rejections, applicant argues that since DURAZZANI fails as argued above these rejections must also fail. This is not persuasive for at least reasons indicated above.

Claim Rejections - 35 USC § 102

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-2, 5-8, 10-12, 15-18 & 20 are rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative under 35 U.S.C. 103(a) as being obvious over DURAZZANI. Re claims 1, 2, 5-8, 10-12, 15-18 & 20, DURAZZANI discloses a washing machine having a plastic tub (1) including a front outer tub (8) having an open front and rear & a rear outer tub (3) having a closed end and an open end which couples to the front outer tub via connecting means (10/12), the front outer tub having a thickness greater than the rear outer tub (see entire document, for instance, Figures 1 & 3 and relative associated text). DURAZZANI further discloses forming the front outer tub via "traditional processing methods" (i.e. injection molding, see col. 1, lines 59-64) to include a first material (calcium carbonate) either inserted inside a second material (injection molded plastic) or "as a filler to plastic" to provide a counterweight or ballast effect in the front outer tub (see, for instance, col. 3, lines 55-65). The Examiner notes

that the specific gravity (density) of calcium carbonate is well known to be higher than conventional injection molded plastics (i.e. polypropylene, polyethylene, polyvinyl chloride, or the like) and, therefore, plastics combined with calcium carbonate necessarily must have a higher specific gravity or density. Re claims 2 & 12, the Examiner further notes that calcium carbonate reads on "metal powder" since calcium is an alkaline earth metal and calcium carbonate is a solid powder.

Even if, assuming *arguendo*, one were to construe the invention of DURAZZANI as being somewhat limiting to separately combined calcium carbonate weights in plastic shells, given the teachings of DURAZZANI that it is well known to add calcium carbonate as filler to plastics for its desired properties (i.e. increased density/weight) the position is taken that it would have been obvious to one skilled in the art to substitute one known tub making method for the other to achieve the predictable results of adding calcium carbonate as filler to plastics to increase the weight of the plastic tub.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 3-4 & 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over DURAZZANI in view of TAMAI *et al.* or BULL *et al.* or KATAYAMA *et al.* Recitation of DURAZZANI is repeated here from above. Although DURAZZANI discloses using "heavy-weight materials other than concrete", specifically calcium carbonate as a filler in plastic, to provide counterweight in a washing machine, DURAZZANI does not

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expressly disclose using other fillers such as aluminum based metal powder or iron based metal powder. Each of TAMAI *et al.* (col. 9, lines 24-42), BULL *et al.* (col. 4, line 64 – col. 5, line 11) & KATAYAMA *et al.* (col. 8, lines 16-24) teach that it is known to provide a molding plastic/polymer with various fillers including calcium carbonate, aluminum powder and iron powder to achieve desired properties. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide any known filler having a higher specific weight (density) than the plastic/polymer used therewith since applicant has not disclosed that using any specific filler (i.e. calcium carbonate or iron or aluminum) solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with other known fillers having a known high density and the selection of any of these known equivalents to provide added counterweight in a washing machine tub would be within the level of ordinary skill in the art.

10. Claims 9 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over DURAZZANI. Recitation of DURAZZANI is repeated here from above. Although DURAZZANI discloses the tub having a front outer tub with open front and rear combined with a rear outer tub with open front and closed rear, DURAZZANI does not expressly disclose a middle outer tub with open front and rear. It would have been obvious to one having ordinary skill in the art at the time the invention was made to separate the rear outer tub of DURAZZANI into two parts to form a middle outer tub and rear outer tub as claimed by applicant, since it has been held that constructing a

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formerly integral structure in various elements involves only routine skill in the art.

Nerwin v. Erlichman, 168 USPQ 177, 179.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

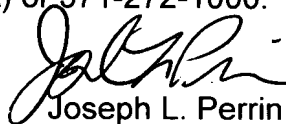
12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Joseph L. Perrin, Ph.D.
Primary Examiner
Art Unit 1746

JLP